IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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IN THE APPLICATION OF	:	Michael Yeung et al.
FOR	:	DOCUMENT SERVICE APPLIANCE
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March 13, 2002
Cleveland, Ohio 44115-1475

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, DC 20231

Dear Sirs:

Enclosed is a set of formal drawings for the abovementioned application. Additionally, prior to examination of the present application, please amend the above-identified application and drawings as follows:

IN THE DRAWINGS

Please amend Figures 76 and 77 according to the included marked-up drawings.

IN THE SPECIFICATION:

Page 28, lines 28-29, please remove all instances of "TBD to";

Page 28, line 29, please replace "JPG etc." with --JPG, etc.--;

Page 30, line 15, please replace "Referring now" with --Reference is made hereinbelow--;

Page 30, line 15, please replace "there" with --where there--;

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Page 30, lines 27-28, please replace "Continuing now with the flow chart of FIG. 78, flow begins at a function block 7800 where" with --Generally,--;

Page 30, line 28, please replace "browser. The user" with --browser and--;

Page 30, line 31, please replace "Flow is to a function block 7804 where the" with --The--;

Page 31, line 1-2, please replace ", as indicated in a function block 7806. In a funciton block 7808, the DMM 202" with --and--;

Page 31, line 5, please delete the sentence "Flow then reaches a Stop termnial."

Page 33, line 25, please replace "view document content" with --and view document content--;

Page 46, line 30, please replace "GDI operates" with --GDI 7602 operates--;

Page 47, line 12, please replace "generates drivers" with --plays back an EMF file--;

Page 47, line 13, please replace "the spool 226" with --a spool 7605--;

Page 47, line 14, please replace "226" with --7605--;

Page 48, line 20, please replace "DGI" with --GDI--;

Page 48, line 26, please replace "monitor routes" with --monitor 7718 routes--;

Page 48, line 26, please replace "kernel0mode" with --kernel-mode--; and

Page 48, line 27, please replace "document" with --respective document files--.

IN THE CLAIMS

Please amend the following claims 1-5, 8-10, accordingly. Please add new claims 10, 11, and 13-32.

1.(Amended) A method of providing access to a network-based document management system from a client, comprising the steps of:

defining access point data representative of an access point within a local file system of the client;

interfacing to said access point with a local file navigation interface; and

accessing the network-based document management system from within the local file navigation interface via said access point defined within said local file system.

2.(Amended)   The method of claim 1, wherein a user of said local file navigation interface in the step of interfacing transfers document files between said local file system and the network-based document management system via said access point.

3.(Amended)   The method of claim 1, wherein said access point in the step of defining is presented as a user-selectable folder icon that conforms to a user interface of an operating system of said client.

4.(Amended)   The method of claim 1, wherein said local file navigation interface in the step of interfacing is integrated into an operating system of said client.

5.(Amended)   The method of claim 1, further comprising the step of validating a user of an operating system of the client prior to granting access to said user to the network-based document management system.

8.(Amended)   The method of claim 5, wherein the step of validating occurs when said user selects said access point via said local file navigation interface.

9.(Amended)   The method of claim 1, wherein said access point in the step of defining provides a link between said local file system and the network-based document management system.

10.(New)   The method of claim 1, wherein a user who accesses the network-based document management system via said access point in the step of accessing performs at least one of: deleting, renaming, moving, and copying a document file; viewing said document file properties; and, viewing said document file in read-only mode.

11.(New)   The method of claim 1, wherein a user who accesses the network-based document management system via said access point in the step of accessing performs at least one of: transferring a folder between said local file system and the network-based document management system; deleting, renaming, moving, and copying said folder; and, viewing said folder properties.

12.(Amended) A method of providing access to a remote document repository from a client, comprising the steps of:

defining access point data representative of an access point within a local file system of the client;

interfacing to said access point with a local file navigation interface; and

accessing the remote document repository via said access point defined within said local file system.

13.(New)   The method of claim 12, wherein a user of said local file navigation interface in the step of interfacing transfers document files between said local file system and the remote document repository via said access point.

14.(New)   The method of claim 12, wherein said access point in the step of defining is presented as a user-selectable folder icon that conforms to a user interface of an operating system of said client.

15.(New)   The method of claim 12, further comprising the step of validating a user of the remote document repository when said user logs in to an operating system of the client.

16.(New)   The method of claim 12, further comprising the step of validating a user of the remote document repository when said user logs in to a network operating system that facilitates network access to the remote document repository.

17.(New)   The method of claim 12, further comprising the step of validating a user of the remote document repository when said user accesses said access point via said local file navigation interface.

18.(New)   A system of accessing a network-based document management system from a client, comprising:

an access point defined within a local file system of the client, the access point having access point data associated therewith; and

a local file navigation interface for interfacing to said access point;

wherein a user accesses the network-based document management system from within the local file navigation interface via said access point defined within said local file system.

19.(New)   The system of claim 18, wherein a user of said local file navigation interface transfers document files between said local file system and the network-based document management system via said access point.

20.(New)   The system of claim 18, wherein said access point is presented as a user-selectable folder icon that conforms to a user interface of an operating system of said client.

21.(New)   The system of claim 18, wherein a user seeking access to the network-based document management system is validated when said user logs in to an operating system of the client.

22.(New)   The system of claim 18, wherein a user seeking access to the network-based document management system is validated when said user logs in to a network operating system that facilitates network access to the network-based document management system.

23.(New)   The system of claim 18, wherein a user seeking access to the network-based document management system is validated when said user accesses said access point via said local file navigation interface.

24.(New)   The system of claim 18, wherein said access point data provides a link between said local file system and the network-based document management system.

25.(New)   The system of claim 18, wherein a user who accesses the network-based document management system via said access point performs at least one of deleting, renaming, moving, and copying said document file, viewing said document file properties and, viewing said document file in read-only mode.

26.(New)   The system of claim 18, wherein a user who accesses the network-based document management system via said access point performs at least one of transferring a folder between said local file system and the network-based document management system, deleting, renaming, moving, and copying said folder and, viewing said folder properties.

27.(New)   A system of accessing a remote document repository from a client, comprising:

an access point defined within a local file system of the client, the access point having access point data associated therewith; and

a local file navigation interface for interfacing to said access point;

wherein a user accesses the remote document repository from within the local file navigation interface via said access point defined within said local file system.

28.(New)   The system of claim 27, wherein a user of said local file navigation interface transfers document files between said local file system and the remote document repository via said access point.

29.(New)   The system of claim 27, wherein said access point is presented as a user-selectable folder icon that conforms to a user interface of an operating system of said client.

30.(New)   The system of claim 27, wherein a user seeking access to the remote document repository is validated when said user logs in to an operating system of the client.

31.(New)   The system of claim 27, wherein a user seeking access to the remote document repository is validated when said user logs in to a network operating system that facilitates network access to the remote document repository.

32.(New)   The system of claim 27, wherein a user seeking access to the remote document repository is validated when said user accesses said access point via said local file navigation interface.
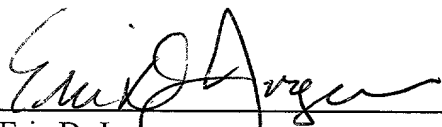
REMARKS

The edits to the drawing are to correct item numbering. No new matter has been added. Entry of these amendments is respectfully requested.

Please charge any additional fees or deficiencies in fees or credit any overpayment to Deposit Account No. 50-0902 of ARTER & HADDEN, LLP, referencing the Docket No. (66329/14869).

Respectfully submitted,

ARTER & HADDEN LLP

Date: March 13, 2002

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destination file folder 1604 that the new document 1600 that will be stored in. This option is available to the user having Edit access rights on the selected file folder. The user is provided a number of methods via the DMM 202 for creating a new document 1600 in a selected destination file folder 1604. The user can capture the document 1600 from a local drive 1602 or network hard drive (not shown) utilizing an interface suitably implemented to allow the user to browse such devices and for selecting the document 1600. This is also called an upload operation. The interface allows the user to then point the destination folder 1604, and perform, e.g., copy or move operations to place the file in the destination folder 1604.

The user can capture input/output from a scanner. The paper documents scanned by the user are converted to an image format and are stored in the user DMM Inbox file folder 710. The user has an option of moving the document from his/her Inbox 710 to a particular file folder 1502 in the tree structure 1500.

The user can capture output from a fax. Paper documents faxed by the user are converted to an image format and stored in the user DMM Inbox file folder 710. The user has an option of moving the document from his/her Inbox 710 to a particular file folder (1502 and 1504) in the tree structure 1500.

The user can capture from e-mail as both text and an attachment. A document sent via e-mail is stored in the user DMM Inbox file folder 710. The user has an option of moving the document 1600 from his/her Inbox 710 to a particular file folder (1502 and 1504) in the tree structure 1500.

The user can capture files from servers disposed on the GCN 112. The GUI provides the capability of specifying the URL of the source document(s) and the destination file folder. The user can also specify how deep to traverse the URL (how many levels). The DMM 202 facilitates download of the specified documents and storage in the specified folder.

The user can create new documents from current documents, and save in a different format. The following format conversions are available to users:[TBD to] PDF,[TBD to] PNG,[TBD to] TIFF,[TBD to] HTML,[TBD to] BMP,[TBD to] JPG, etc. A new document can be created by merging several documents (the final document will be a multi-page image document).

destination file folder 1604 that the new document 1600 that will be stored in. This option is available to the user having Edit access rights on the selected file folder. The user is provided a number of methods via the DMM 202 for creating a new document 1600 in a selected destination file folder 1604. The user can capture the document 1600 from a local drive 1602 or network hard drive (not shown) utilizing an interface suitably implemented to allow the user to browse such devices and for selecting the document 1600. This is also called an upload operation. The interface allows the user to then point the destination folder 1604, and perform, e.g., copy or move operations to place the file in the destination folder 1604.

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The user can create new documents from current documents, and save in a different format. The following format conversions are available to users: PDF, PNG, TIFF, HTML, BMP, JPG, etc. A new document can be created by merging several documents (the final document will be a multi-page image document).

document. The document can be saved along with its meta data to an attached storage device (e.g., hard disk). The user has two options for performing this operation. First, the user can select one or more documents from the tree structure 1500, and then select a "Save" menu option. Second, the user can select the "Save" option from inside the document viewer to save the document to selected ones of destination storage devices attached to the appliance 200. The user can save the document to an external EDMS (Electronic Document Management System) like Microsoft Share Point, Lotus Notes, TABS Proof Buddy, Questys, other online document management systems, etc. As described hereinabove, the user can perform this operation for either multiple documents or for a single document by opening it in the document viewer such that the external EDMS system can be specified. It is preferable that the external EDMS destination should be compliant with ODMA (Open Document Management API).

DMM Bookmark

[Referring now] Reference is made hereinbelow to FIG. 78, where there is illustrated a flow chart of the process for creating a bookmarked document, in accordance with a disclosed embodiment. A unique feature provided by the DMM module 202 is the capability of defining a bookmark to a document stored inside or outside of the DMM repository 1400. The procedure is equivalent to defining a symbolic link to a document, and storing this link in a general-purpose DMM folder. The symbolic link is treated as any other document managed by the DMM 202. Further, upon linking to a document, the user can download (i.e., retrieve a copy) a document stored in the DMM repository 1400 to the user local machine or network hard drive. This procedure is performed via the iSP browser-based thin client 224 by following the subsequent steps: select the bookmark menu item; select the Create New Bookmark; browse to desired local or network file; select desired file; define the bookmark name; and select OK to exit the operation.

Generally, [Continuing now with the flow chart of FIG. 78, flow begins at a function block 7800 where] the client user opens the browser[.] and [The user] then selects a "Create Bookmark" option (or the option suitably provided in the browser being used) as is performed conventionally with, for example, Microsoft Internet Explorer, Netscape Navigator, etc. [Flow is to a function block 7804 where the] The user selects the file to

document. The document can be saved along with its meta data to an attached storage device (e.g., hard disk). The user has two options for performing this operation. First, the user can select one or more documents from the tree structure 1500, and then select a "Save" menu option. Second, the user can select the "Save" option from inside the document viewer to save the document to selected ones of destination storage devices attached to the appliance 200. The user can save the document to an external EDMS (Electronic Document Management System) like Microsoft Share Point, Lotus Notes, TABS Proof Buddy, Questys, other online document management systems, etc. As described hereinabove, the user can perform this operation for either multiple documents or for a single document by opening it in the document viewer such that the external EDMS system can be specified. It is preferable that the external EDMS destination should be compliant with ODMA (Open Document Management API).

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Generally, the client user opens the browser and then selects a "Create Bookmark" option (or the option suitably provided in the browser being used) as is performed conventionally with, for example, Microsoft Internet Explorer, Netscape Navigator, etc. Flow is to a function block 7804 where the user selects the file to

bookmark. The DMM 202 then intercedes[, as indicated in a function block 7806. In a function block 7808, the DMM 202] and creates an association between the selected file and file location with a link. The link information is then stored on the client computer such that the user can select the bookmark, causing the browser to link to the location of the bookmarked document in the DMM repository 1400. [Flow then reaches a Stop terminal.] The DMM module 202 allows users to perform the following bookmark operations: Create, Delete, Rename, Copy, Move, View Properties, Change Properties, Search, View a document referenced by the bookmark, and Save the referenced document in the DMM repository 1400. If the document referenced by the bookmark is deleted, or if its location is changed, the bookmark will become invalid and an error will be displayed when the user tries to access the document.

The user can search for a document by specifying index information, attributes, or content data in combination with the following logical operators: AND, NOT, OR, Not equal, Max, Min. The user can also enter wild card characters for specific attributes. The search can also be limited to the specific file folder, branch, or the entire tree hierarchy 1500. The user has the option to save the search queries for later use, and to retrieve the saved search queries. The search result depends on the above-specified criteria, and contains the list of documents with some visible properties such as Name, Creation date, and size.

The user can view a selected document in a "Read Only" mode such that no editing of contents is allowed. In this case, the original application is invoked inside the browser (however, if the browser does not have support for the original application, the user will have an option of downloading the document and opening it on the local machine with the native application). The read-only option is available for both image, as well as non-image document formats.

The user can display the selected document as "Read-Modify", an option available only for image document formats. The document is opened for viewing with the document viewer application running as an applet inside the browser. Insofar as the user opens the document as "Read-Modify", no other user can modify the contents of the respective document. After modifying the document, the user can then save the modifications.

bookmark. The DMM 202 then intercedes and creates an association between the selected file and file location with a link. The link information is then stored on the client computer such that the user can select the bookmark, causing the browser to link to the location of the bookmarked document in the DMM repository 1400. The DMM module 202 allows users to perform the following bookmark operations: Create, Delete, Rename, Copy, Move, View Properties, Change Properties, Search, View a document referenced by the bookmark, and Save the referenced document in the DMM repository 1400. If the document referenced by the bookmark is deleted, or if its location is changed, the bookmark will become invalid and an error will be displayed when the user tries to access the document.

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copy of the document or simply check in. In the first case, a new version of the document will be created by the DMM component 202, with the currently uploaded version as the latest version of the document. In the second case (i.e., check in), a new version is not created, but the status of the document is changed from "check out" to "check in", and the document will be unlocked for access by other users.

The user has an option of using WebDAV-enabled client applications to access documents stored in DMM 202.

DMM Repository Access Via Windows Explorer

Referring now to FIG. 18, there is illustrated a screenshot of a window 1800 showing a repository folder 1802 displayed to the user for accessing repository documents. The iSP DMM 202 presents the repository folder 1802 in the Windows™ Explorer interface file navigation tool. The DMM operations available via the Windows Explorer interface utility represent a subset of the DMM operations available to a user who uses the DMM browser-based thin client 224. Nevertheless this feature provides ease of use to users who are accustomed to using the Windows tools and environment, and provides sufficient functionality for users who just want to perform basic DMM functionality. When a user invokes Windows Explorer, the Repository 1400 managed by the iSP DMM 202 is represented as a Repository folder 1802 in the Explorer folder pane 1804. The user can perform the following operations on the DMM folder as long as he or she has the right credentials (these operations may be challenged via an account name/password request): expand the DMM tree structure (expansion plus sign "+" not shown), view folder properties, delete folder, rename folder, copy folder, move folder, drag and drop documents, delete documents, rename documents, copy documents, move documents, view document properties, and view document content for read only.

In the current illustration of FIG. 18, the Repository folder 1802 is shown as a folder in a peripheral folder area 1808. However, the Repository folder 1802 can also be placed in other areas, for example, the Network Neighborhood area 1806 where after the user expands this area using the plus sign "+", the Repository folder 1802 is displayed therein to the user. The Repository folder 1802 can be displayed in the drive area having a drive icon (e.g., similar to that drive icon associated with the drive labeled Data2 [E:]).

copy of the document or simply check in. In the first case, a new version of the document will be created by the DMM component 202, with the currently uploaded version as the latest version of the document. In the second case (i.e., check in), a new version is not created, but the status of the document is changed from "check out" to "check in", and the document will be unlocked for access by other users.

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In the current illustration of FIG. 18, the Repository folder 1802 is shown as a folder in a peripheral folder area 1808. However, the Repository folder 1802 can also be placed in other areas, for example, the Network Neighborhood area 1806 where after the user expands this area using the plus sign "+", the Repository folder 1802 is displayed

therein to the user. The Repository folder 1802 can be displayed in the drive area having a drive icon (e.g., similar to that drive icon associated with the drive labeled Data2 [E:]).

simultaneously to multiple destinations of different types including printers, faxes, web servers, and the DMM 202. On Windows® platforms this is accomplished by a generic iSP print driver which repeatedly invokes specific print drivers. Reference is directed to FIGURES 63-66 for screenshots of the windows provided by the user interface related to the user selecting existing output destinations. The user initiates a print operation directed to the appliance 200 by selecting the "File-Print" menu, which results in the display of the "Print Dialog" box, and by choosing the appliance 200 as the print destination. Once this is done the user has two possible options, either to select the "OK" button, or to select the "Printer Properties" button. If the user selects the "Printer Properties" button, a new dialog box is opened. The user can now set the destination of the print operation as well as generic, common properties, such as Page Size, Orientation, Color, etc. The user is provided the capability to select one, a few, or all of the available destination types (i.e., Printer, E-mail, Web Post, Fax, DMM, etc.), and any number of devices within each device category. If the user selects the OK button, a dialog box is displayed that allows the selection of vendor-specific destination properties. The user is offered the opportunity to store all of these settings in a profile file that can be used to simplify subsequent "Print File" operations. Once these properties are set, the user exits these screens by selecting the "OK" button. In accordance with prior destination selections, the "Print File" operation is initiated by repeatedly invoking the corresponding print drivers.

Referring now to FIG. 76, there is illustrated a block diagram of a system for directing a single document to multiple output devices, in accordance with a disclosed embodiment. As a prelude to initiating multiple-output-device printing, the user generates a document within an application 7600 (e.g., a Windows® word processing application, in this particular embodiment). When the user desires to output the document to multiple destinations, he or she directs the output to the disclosed appliance system 200 via a File-Print menu. When the destination devices have been selected, and the user initiates the document transfer, the document is sent to a component of the client operating system for conversion. When using the Windows® operating system, the component is called the Graphic Device Interface (GDI) 7602. The GDI 7602 operates as a

simultaneously to multiple destinations of different types including printers, faxes, web servers, and the DMM 202. On Windows® platforms this is accomplished by a generic iSP print driver which repeatedly invokes specific print drivers. Reference is directed to FIGURES 63-66 for screenshots of the windows provided by the user interface related to the user selecting existing output destinations. The user initiates a print operation directed to the appliance 200 by selecting the "File-Print" menu, which results in the display of the "Print Dialog" box, and by choosing the appliance 200 as the print destination. Once this is done the user has two possible options, either to select the "OK" button, or to select the "Printer Properties" button. If the user selects the "Printer Properties" button, a new dialog box is opened. The user can now set the destination of the print operation as well as generic, common properties, such as Page Size, Orientation, Color, etc. The user is provided the capability to select one, a few, or all of the available destination types (i.e., Printer, E-mail, Web Post, Fax, DMM, etc.), and any number of devices within each device category. If the user selects the OK button, a dialog box is displayed that allows the selection of vendor-specific destination properties. The user is offered the opportunity to store all of these settings in a profile file that can be used to simplify subsequent "Print File" operations. Once these properties are set, the user exits these screens by selecting the "OK" button. In accordance with prior destination selections, the "Print File" operation is initiated by repeatedly invoking the corresponding print drivers.

Referring now to FIG. 76, there is illustrated a block diagram of a system for directing a single document to multiple output devices, in accordance with a disclosed embodiment. As a prelude to initiating multiple-output-device printing, the user generates a document within an application 7600 (e.g., a Windows® word processing application, in this particular embodiment). When the user desires to output the document to multiple destinations, he or she directs the output to the disclosed appliance system 200 via a File-Print menu. When the destination devices have been selected, and the user initiates the document transfer, the document is sent to a component of the client operating system for conversion. When using the Windows® operating system, the component is called the Graphic Device Interface (GDI) 7602. The GDI 7602 operates as a

raster image processor and converts the document file to a dot pattern file before forwarding the converted document to the printer.

The Windows® 32-bit operating system uses an intermediary vector-based enhanced meta file (EMF) system that renders the image and passes the corresponding data stream to the printer as a background operation, so the user can continue working on applications in the foreground. In this particular embodiment, the GDI 7602 converts the document into an EMF file. The EMF file is then transmitted to a print processor 7604 of a spooler of the client machine. The spooler comprises the print processor 7604 that processes the received EMF file into multiple files according to the number of destination devices selected. For example, if the user selected as destination output devices an iSP fax 7606, an iSP printer 7608, and a non-iSP printer 7610, the print processor 7604 [generates drivers] plays back an EMF file for each output device.

The processor 7604 spools one or more files in EMF format to [the spool 226] a spool 7605, as processing is completed. The EMF files are then retrieved from the spool [226] 7605 by the processor 7604 and forwarded to corresponding device contexts of the GDI 7602 corresponding to the selected destination output devices. Device Context (DC) includes the notion of a driver, thus allowing the DC to be used as an interface to standard, as well as non-standard output devices. This is possible because the DC can be used to store extra information concerning the internal capacity of the output device, for example, a printer or fax. For example, an illustrated iSP DC block 7612 comprises multiple DCs for the respective destination devices. More specifically, the iSP DC block 7612 comprises a first iSP DC associated with the iSP printer 7608, a second iSP DC associated with the iSP fax 7606, a third iSP DC associated with an iSP e-mail destination 7614, and a fourth iSP DC associated with an iSP web-post destination 7616. The iSP DC 7612 then passes the respective EMF files to the corresponding distribution agents of the selected destination devices to facilitate output of the document generated from the application 7600.

The GDI 7602 also includes a non-iSP DC block 7618 for driving non-iSP destination devices. In this example, the user has also selected the non-iSP printer 7610 as a destination output device. Thus the print processor 7604 generates an EMF driver file for the non-iSP printer 7610 and transmits the file to the non-iSP DC 7618. The non-

raster image processor and converts the document file to a dot pattern file before forwarding the converted document to the printer.

The Windows® 32-bit operating system uses an intermediary vector-based enhanced meta file (EMF) system that renders the image and passes the corresponding data stream to the printer as a background operation, so the user can continue working on applications in the foreground. In this particular embodiment, the GDI 7602 converts the document into an EMF file. The EMF file is then transmitted to a print processor 7604 of a spooler of the client machine. The spooler comprises the print processor 7604 that processes the received EMF file into multiple files according to the number of destination devices selected. For example, if the user selected as destination output devices an iSP fax 7606, an iSP printer 7608, and a non-iSP printer 7610, the print processor 7604 plays back an EMF file for each output device.

The processor 7604 spools one or more files in EMF format to a spool 7605, as processing is completed. The EMF files are then retrieved from the spool 7605 by the processor 7604 and forwarded to corresponding device contexts of the GDI 7602 corresponding to the selected destination output devices. Device Context (DC) includes the notion of a driver, thus allowing the DC to be used as an interface to standard, as well as non-standard output devices. This is possible because the DC can be used to store extra information concerning the internal capacity of the output device, for example, a printer or fax. For example, an illustrated iSP DC block 7612 comprises multiple DCs for the respective destination devices. More specifically, the iSP DC block 7612 comprises a first iSP DC associated with the iSP printer 7608, a second iSP DC associated with the iSP fax 7606, a third iSP DC associated with an iSP e-mail destination 7614, and a fourth iSP DC associated with an iSP web-post destination 7616. The iSP DC 7612 then passes the respective EMF files to the corresponding distribution agents of the selected destination devices to facilitate output of the document generated from the application 7600.

The GDI 7602 also includes a non-iSP DC block 7618 for driving non-iSP destination devices. In this example, the user has also selected the non-iSP printer 7610 as a destination output device. Thus the print processor 7604 generates an EMF driver file for the non-iSP printer 7610 and transmits the file to the non-iSP DC 7618. The non-

iSP DC 7618 processes the EMF file to drive the corresponding selected non-iSP destination device 7610 to facilitate output of the document generated from the application 7600.

Referring now to FIG. 77, there is illustrated a block flow diagram for processing EMF and non-EMF files for destination output devices. Flow begins at the application block 7600 where the user of the thick client 222 generates a document for output to one or more destination devices. When the user decides to output the document, the user initiates a File Print function by selecting the iSP driver, and the document data passes from the application 7600 to the GDI block 7602 of the client operating system. Flow is then to a decision bubble 7700 to determine the output format of the document based on the selected driver. If the iSP driver has been selected, the document is output from the "Y" path of decision bubble 7700 in EMF format to a file spool 7702. The print processor 7604 of the client machine plays the EMF file back and passes the resulting data to the GDI user module 7602 to then generate a printer graphics DLL file.

This process is performed each time for the corresponding number of destination devices. For example, if three destination devices are selected that correspond to the iSP system, three EMF files are generated to the EMF Print processor 7604, played back, and a corresponding printer graphics DLL created.

Thus a GDI rendering engine (GRE) 7704 receives each of the played back files from the [DGI] GDI module 7602. The GRE 7704 generates a first print graphics DLL file 7706 for a first destination device 7712. The GRE 7704 receives the second played back EMF file of a respective second destination device 7714 and generates a second print graphics DLL file 7708. The GRE 7704 receives the third played back EMF file of a respective third destination device 7716 and generates a third print graphics DLL file 7710. Data output from the three printer graphics DLLs (7706, 7708, and 7710) is raw data to a port monitor 7718. The port monitor 7718 routes the raw data via the [kernel0mode] kernel-mode driver stack to the appliance 200. The appliance 200 then distributes the respective document files to the multiple destination devices (7712, 7714, and 7716).

In an alternative embodiment, all spooled files are GDI data (non-EMF). The spooled GDI data is then despooled and forwarded by the print processor 7604 to the GRE 7704 to process the iSP drivers for driving iSP selected destination devices. The

iSP DC 7618 processes the EMF file to drive the corresponding selected non-iSP destination device 7610 to facilitate output of the document generated from the application 7600.

Referring now to FIG. 77, there is illustrated a block flow diagram for processing EMF and non-EMF files for destination output devices. Flow begins at the application block 7600 where the user of the thick client 222 generates a document for output to one or more destination devices. When the user decides to output the document, the user initiates a File Print function by selecting the iSP driver, and the document data passes from the application 7600 to the GDI block 7602 of the client operating system. Flow is then to a decision bubble 7700 to determine the output format of the document based on the selected driver. If the iSP driver has been selected, the document is output from the "Y" path of decision bubble 7700 in EMF format to a file spool 7702. The print processor 7604 of the client machine plays the EMF file back and passes the resulting data to the GDI user module 7602 to then generate a printer graphics DLL file.

This process is performed each time for the corresponding number of destination devices. For example, if three destination devices are selected that correspond to the iSP system, three EMF files are generated to the EMF Print processor 7604, played back, and a corresponding printer graphics DLL created.

Thus a GDI rendering engine (GRE) 7704 receives each of the played back files from the GDI module 7602. The GRE 7704 generates a first print graphics DLL file 7706 for a first destination device 7712. The GRE 7704 receives the second played back EMF file of a respective second destination device 7714 and generates a second print graphics DLL file 7708. The GRE 7704 receives the third played back EMF file of a respective third destination device 7716 and generates a third print graphics DLL file 7710. Data output from the three printer graphics DLLs (7706, 7708, and 7710) is raw data to a port monitor 7718. The port monitor 7718 routes the raw data via the kernel-mode driver stack to the appliance 200. The appliance 200 then distributes the respective document files to the multiple destination devices (7712, 7714, and 7716).

In an alternative embodiment, all spooled files are GDI data (non-EMF). The spooled GDI data is then despooled and forwarded by the print processor 7604 to the GRE 7704 to process the iSP drivers for driving iSP selected destination devices. The

1.(Amended) A method of providing access to a network-based document management system from a client, comprising the steps of:

defining <u>access point data representative of</u> an access point within a local file system of the client;

interfacing to said access point with a local file navigation interface; and

accessing the network-based document management system <u>from within the local file navigation interface</u> via said access point defined within said local file [access interface] <u>system</u>.

2.(Amended) The method of claim 1, wherein a user of said local file [access] <u>navigation</u> interface in the step of [providing] <u>interfacing</u> transfers [documents] <u>document files</u> between said local file [access interface] <u>system</u> and the network-based document management system [utilizing] <u>via</u> said access point.

3.(Amended) The method of claim 1, wherein said access point in the step of [accessing] <u>defining</u> is [defined] <u>presented</u> as a user-selectable <u>folder</u> icon that conforms to a user interface of [said] <u>an</u> operating system of said client.

4.(Amended) The method of claim 1, wherein said local file [access] <u>navigation</u> interface in the step of [providing] <u>interfacing</u> is integrated into [said] <u>an</u> operating system of said client.

5.(Amended) The method of claim 1, further comprising the step of validating a user of [said] <u>an</u> [client-based] operating system <u>of the client</u> prior to granting access to said user to the network-based document management system.

8.(Amended) The method of claim 5, wherein the step of validating occurs when said user selects said access point <u>via</u> [of] said local file [access] <u>navigation</u> interface.

9.(Amended) The method of claim 1, wherein said access point in the step of [accessing] <u>defining</u> provides a link between said local file [access interface] <u>system</u> and the network-based document management system.

12[0].(Amended)   A method of providing access to a <u>remote</u> document [server application] <u>repository</u> from a client, comprising the steps of:

defining <u>access point data representative of</u> an access point within a local file system of the client;

interfacing to said access point with a local file navigation interface; and

accessing the <u>remote</u> document [server application] <u>repository</u> via said access point defined within said local file [access interface] <u>system</u>.